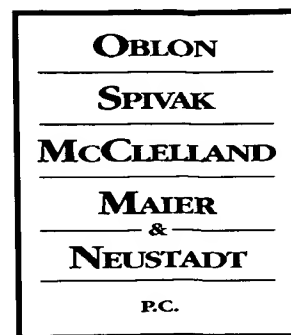




Docket No.: 209524US0CONT

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313



ATTORNEYS AT LAW

RE: Application Serial No.: 09/892,864
Applicants: Keiichi YOKOYAMA, et al.
Filing Date: June 28, 2001
For: PROCESS FOR PRODUCING
TRANSGLUTAMINASE
Group Art Unit: 1652
Examiner: PATTERSON, C.

SIR:

Attached hereto for filing are the following papers:

Letter to Commissioner,

English translation of the International Preliminary Examination Report

Our check in the amount of -0- is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R. 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. 15-0030. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

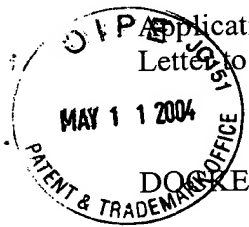
OBLON, SPIVAK, McCLELLAND,
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Application Serial No. 09/892,864
Letter to Commissioner

DOCKET NO.: 209524US0CONT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :
KEIICHI YOKOYAMA, ET AL. : EXAMINER: PATTERSON, C.
SERIAL NO: 09/892,864 :
FILED: JUNE 28, 2001 : GROUP ART UNIT: 1652
FOR: PROCESS FOR PRODUCING TRANSGLUTAMINASE

LETTER TO COMMISSIONER

COMMISSIONER FOR PATENTS
ALEXANDRIA, VA 22313-1450

SIR:

On April 30, 2004, Applicants timely filed a response to the Office Action dated January 12, 2004. Applicants are filing herewith a copy of the English translation of the International Preliminary Examination Report.

Applicants again submit that the application is now in condition for allowance, and early notification of such action is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Stephen G. Baxter, Ph.D.
Attorney of Record
Registration No. 32,884

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413-2220
(OSMMN 08/03)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

6T
Translation

(j)

| | | |
|---|---|---|
| Applicant's or agent's file reference P2626PCT-AJ | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/JP99/07250 | International filing date (day/month/year) 24 December 1999 (24.12.99) | Priority date (day/month/year) 28 December 1998 (28.12.98) |
| International Patent Classification (IPC) or national classification and IPC C12N 9/10 // C12N 15/54 | | |
| Applicant AJINOMOTO CO., INC. | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ ~~Non-establishment of opinion with regard to novelty, inventive step and industrial applicability~~
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

| | |
|--|---|
| Date of submission of the demand 28 April 2000 (28.04.00) | Date of completion of this report 19 October 2000 (19.10.2000) |
| Name and mailing address of the IPEA/JP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP99/07250

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description: _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the claims: _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the drawings: _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description: _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☒ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☒ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP99/07250

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Claims

1-10

YES

NO

Claims

Inventive step (IS)

Claims

1-10

YES

NO

Claims

Industrial applicability (IA)

Claims

1-10

YES

NO

Claims

2. Citations and explanations

Document 1

Biosic. Biotechnol. Biochem. (1997), Vol. 61, No. 5, pages 830-835, Kawai M. et al., "High-level expression of the chemically synthesized gene for microbial transglutaminase from streptovercillium in Escherichia coli"

Document 2

Katsuhide Aburatani et al., "Applied Chemistry Lecture 11 "Protein Engineering (in Japanese)," K.K. Asakura Shoten, (20.11.91), pages 52-54, pages 60-64

1. The subject matters of claims 1-10 appear to involve an inventive step in view of documents 1 and 2 cited in the ISR. Documents 1 and 2 do not describe that a denatured enzyme is processed to form an intermediate structure having enzymatic activity in an aqueous medium in an acidic region, and further to form a high-order structure having enzymatic activity in an aqueous medium in a neutral pH region. Furthermore, a person skilled in the art could not have easily conceived of this constitution from documents 1 and 2.